

Fact Sheet



For Proposed Minor Modification Permitting Action Under 45CSR30 and Title V of the Clean Air Act

This Fact Sheet serves to address the changes specific to this Minor Modification, and shall be considered a supplement to the Fact Sheet corresponding with the Title V operating permit issued on September 20, 2013.

Permit Number: **R30-00300012-2013**

Application Received: **March 11, 2015**

Plant Identification Number: **03-054-00300012**

Permittee: **Knauf Insulation, Inc.**

Facility Name: **Inwood Plant**

Mailing Address: **4812 Tabler Station Road, Inwood, WV 25428**

Permit Action Number: *MM01* Revised: *Proposed*

Physical Location:	Inwood, Berkeley County, West Virginia
UTM Coordinates:	756.55 km Easting • 4,365.50 km Northing • Zone 17
Directions:	From Martinsburg, take I-81 southwest to Tabler Station Road, Exit 8 (County Route 32). Site is located on the southeast corner of the I-81 and County Route 32 intersection.

Facility Description

Raw Materials are mixed into a batch and the batch is then melted to form glass. The molten glass is separated into streams by use of a forehearth and fiber is spun into strands by the means of fiberizers. The fibers are collected to form a blanket then cured in a three-zone oven. Upon exiting the curing oven the blanket is cooled using a "cooling table". The cooled blanket is then cut to size in rolls and batts of insulation per customer requirements. The facility is characterized by SIC code 3296 (wool fiberglass manufacturing).

Proposed Modification

The Inwood facility can produce two insulation types, a bonded product or an un-bonded product. The facility receives raw materials that are mixed into batch and the batch is then melted to form molten glass. The molten glass is separated into streams by use of a forehearth and fiber is spun into strands by the means of fiberizers. In bonded fiberglass production, the fine fibers are transferred to a fiber forming section where water, wax and ECOSE binder are added and are collected to form a binder coated fiber blanket, which is then cured in a three-zone oven. Upon exiting the curing oven the blanket is cooled via a “cooling table”. The cooled blanket is then cut to size in rolls and batts of insulation per customer demand and packaged for shipment offsite. In the un-bonded process, the molten glass is processed into fine fibers which are collected in a forming section. Fluids are applied at various locations to enhance the performance of the end product. The product is then bagged and banded for storage and shipment. Wet scrubbers, an air tumbler, dust collectors and cyclones are used to control emissions at various points in the material handling and the resinated and non-resinated processes.

Knauf is planning to replace the existing wool fiberglass fiberization technology on Line 1 at the Inwood Facility with Knauf fiberization technology in order to be consistent with other operations at other Knauf facilities. Line 1 produces bonded product. The updated production process will operate more efficiently with the ECOSE Technology Binder, which will be used exclusively at the Inwood Facility.

Detailed descriptions of the proposed changes to each portion of the process as a result of the proposed project are provided below.

Raw Material Handling (Group 001)

The raw material operations consists of several storage bins for sand, aplite, borax, soda ash, cullet, batch houses which receive and mix the raw materials, and several miscellaneous binder mixing tanks. Outside of an increase in production, no changes are anticipated in the solids raw material handling. There are several storage tanks that will be removed and several storage tanks that will have their service changed. The table below provides a summary of the tank changes permitted under R14-0015L.

Tank ID	Proposed Tank Description	Tank Size	Proposed Change
T3	ECOSE Storage Tank	4,500 gallons	Modified storage contents
T4	ECOSE Storage Tank	4,500 gallons	Modified storage contents
T5	ECOSE Storage Tank	4,500 gallons	Modified storage contents
T6	ECOSE Storage Tank	4,500 gallons	Modified storage contents
T7A	Wax Storage Tank	5,000 gallons	N/A
T7B	Wax Storage Tank	5,000 gallons	N/A
T8	Ammonia (aqueous) Storage Tank	6,000 gallons	N/A
M1	Catalyst Mix Tank	1,200 gallons	New
M2	Catalyst Holding Tank	1,700 gallons	New
M3	Spare Storage Tank	1,700 gallons	Modified storage contents; ID changed from M2 to M3
M4	Filtered Water Hold Tank	3,200 gallons	Modified storage contents; ID changed from M3 to M4
M5	Binder Mix Tank	750 gallons	New
M6	Binder Holding Tank	1,700 gallons	Modified storage contents; ID changed from M5 to M6
M1	Pre-React Mix Tank	1,200 gallons	Removed
M4	Additive Mix Tank	150 gallons	Removed
M6	Pre-React Hold Tank	50 gallons	Removed
M7	Ammonia (aqueous) Storage Tank	50 gallons	Removed
M8	Process Water Tank	50 gallons	Removed
M9	Additive Tank	50 gallons	Removed
M10	Binder Holding Tank	1,500 gallons	Never installed

Melting and Refining Line 1 (Group 002)

No significant changes will be made to the melter, conditioner, or forehearth. Knauf is proposing to increase the permitted glass pull rate of the melter from 8,000 lb/hr to 9,000 lb/hr. In order to accommodate the larger Knauf fiberizers, Knauf will expand the bushing spacing on the forehearth.

Forming and Collecting Line 1 (Group 004)

The existing forming/collecting section on Line 1 will be replaced by a single module forming section utilizing Knauf fiberizers. There will be three forming/fan zones and multiple cured product fiberizers fired with natural gas (Total rating at 14 MMBtu/hr). In addition, three (3) new wet venturi scrubbers will be installed on Line 1 forming collection area to replace the existing controls (dropout boxes with water sprays).

Curing and Cooling Line 1 (Group 006)

There will be no changes to the current configuration of the curing ovens and the regenerative thermal oxidizer (RTO) on Line 1. The curing and cooling section will have an increase in throughput as a result of the project.

Emissions Summary

The table below gives the facility's current potential emissions of pollutants, changes to potential emissions for this modification, and the proposed modified facility PTEs.

Regulated Pollutants	Current ¹	MM01 Change ²	Proposed
Carbon Monoxide (CO)	256.5	-39.75	216.75
Nitrogen Oxides (NO _x)	158.1	0	158.1
Particulate Matter (PM _{2.5})	161.7	0	161.7
Particulate Matter (PM ₁₀)	162.2	0	162.2
Total Particulate Matter (TSP)	165.2	0	165.2
Sulfur Dioxide (SO ₂)	0.3	0	0.3
Volatile Organic Compounds (VOC)	125.6	0	125.6
Hazardous Air Pollutants	Current ¹	MM01 Change	Proposed
Formaldehyde	28.1	-28.1	0
Methanol	82.5	-82.5	0
Phenol	54.3	-54.3	0
Regulated Pollutants other than Criteria and HAP	Current ¹	MM01 Change	Proposed
Formic acid	13.6	-13.6	0
Ammonia	163.9	+10.16	174.06

¹ Current potential emissions were transcribed from the Fact Sheet of the renewal Title V permit.

² Except for formic acid, the changes for minor modification MM01 were provided by the permittee in a revised application Attachment S in an e-mail from Mr. Grover Thomas dated October 7, 2015. The change in formic acid was noted by the permittee in an attachment to an e-mail from Mr. Grover Thomas dated November 16, 2015. Formic acid is not emitted due to discontinuing use of phenol/formaldehyde binder.

Title V Program Applicability Basis

With the proposed changes associated with this modification, this facility maintains the potential to emit 216.75 tpy of CO; 158.1 tpy of NOx; 162.2 tpy of PM10; and 125.6 tpy of VOC. Due to this facility's potential to emit over 100 tons per year of criteria pollutant, Knauf Insulation, Inc. Inwood Plant is required to have an operating permit pursuant to Title V of the Federal Clean Air Act as amended and 45CSR30.

Legal and Factual Basis for Permit Conditions

The State and Federally-enforceable conditions of the Title V Operating Permits are based upon the requirements of the State of West Virginia Operating Permit Rule 45CSR30 for the purposes of Title V of the Federal Clean Air Act and the underlying applicable requirements in other state and federal rules.

The modification to this facility has been found to be subject to the following applicable rules:

Federal and State:	45CSR7	Control of PM from Mfg. Processes
	45CSR13	Permits for construction/modification
	45CSR16	Emission standards pursuant to 40 C.F.R. 60
	45CSR30	Operating permit requirement
	45CSR34	Emission standards for HAPs
	40 C.F.R. 60 Subpart PPP	NSPS for Wool Fiberglass Mfg. Plants
	40 C.F.R. 63 Subpart ZZZZ	RICE MACT

State Only: None

Each State and Federally-enforceable condition of the Title V Operating Permit references the specific relevant requirements of 45CSR30 or the applicable requirement upon which it is based. Any condition of the Title V permit that is enforceable by the State but is not Federally-enforceable is identified in the Title V permit as such.

The Secretary's authority to require standards under 40 C.F.R. Part 60 (NSPS), 40 C.F.R. Part 61 (NESHAPs), and 40 C.F.R. Part 63 (NESHAPs MACT) is provided in West Virginia Code §§ 22-5-1 *et seq.*, 45CSR16, 45CSR34 and 45CSR30.

Active Permits/Consent Orders

Permit or Consent Order Number	Date of Issuance	Permit Determinations or Amendments That Affect the Permit (<i>if any</i>)
R14-0015L	July 21, 2015	

Conditions from this facility's Rule 13 permit(s) governing construction-related specifications and timing requirements will not be included in the Title V Operating Permit but will remain independently enforceable under the applicable Rule 13 permit(s). All other conditions from this facility's Rule 13 permit(s) governing the source's operation and compliance have been incorporated into this Title V permit in accordance with the "General Requirement Comparison Table," which may be downloaded from DAQ's website.

Determinations and Justifications

- I. **45CSR7 – To Prevent and Control Particulate Matter Air Pollution From Manufacturing Processes and Associated Operations.** This rule is applicable to the facility. The 1st and 2nd production lines meet the definition of a “manufacturing process” in 45CSR§7-2.20. Since these production lines melt glass, they meet the definition in 45CSR§7-2.39.a. of a Type ‘a’ manufacturing process source operation, and the rule has been applied accordingly. Permit condition 3.1.11. sets forth the allowable aggregate PM limitations for the 1st and 2nd production lines. These limits are based upon the process rates which have been revised based upon the changes permitted in R14-0015L. The permittee has provided an updated total process weight rate for each line. The rates are 192,750 lb/hr and 171,516 lb/hr for the 1st and 2nd production lines, respectively. Using the updated total process rates for both lines, the limits pursuant to 45CSR§7-4.1. from Table 45-7A for a Type ‘a’ source for the 1st and 2nd lines are 36.71 lb/hr and 35.86 lb/hr, respectively. For Line #1, this is an aggregated limit for the emissions from emission points EP12, EP13, and EP14. For Line #2, the aggregated limit is for emission points EP22, EP23, and EP24. However, the PM limits set by the PSD permit yield a more stringent aggregate, as demonstrated below.

Line #1

$$\text{Line \#1 Emissions} = (\text{EP12} + \text{EP13} + \text{EP14}) = (0.07 \text{ lb/TGP} + 3.49 \text{ lb/TGP}) = 3.56 \text{ lb/TGP}$$

For the preceding calculation note that emission points EP13 and EP14 have an aggregate limit of 3.49 lb/TGP (discussed below in the PSD permit section of this Fact Sheet). The Line #1 pull rate is 4.5 ton/hr. Thus, PM emissions are $(3.56 \text{ lb/TGP}) \times (4.5 \text{ ton/hr}) = 16.02 \text{ lb/hr}$, which is 44% of the 45CSR7 limit for Line #1.

Line #2

$$\text{Line \#2 Emissions} = (\text{EP22} + \text{EP23} + \text{EP24}) = (0.07 \text{ lb/TGP} + 3.25 \text{ lb/TGP} + 0.93 \text{ lb/TGP}) = 4.25 \text{ lb/TGP}$$

The Line #2 pull rate is 4.0 ton/hr. Thus, PM emissions are $(4.25 \text{ lb/TGP}) \times (4.0 \text{ ton/hr}) = 17.0 \text{ lb/hr}$, which is 47% of the 45CSR7 limit for Line #2.

Compliance with the PSD permit limits for PM will ensure compliance with the applicable 45CSR§7-4.1. limit for each manufacturing line. Permit condition 3.1.11. has been revised to account for the updated process weight rates and the resultant 45CSR7 limits. This writer noted that the current permit condition is not technically correct in its content and somewhat confusing in that it appears that the 16.0 lb/hr and 17.0 lb/hr limits are those from 45CSR7 when in fact they are aggregate limits from the PSD permit limits in conditions 5.1.6., 6.1.2., and 7.1.1. The permit condition has been modified to specify the limits from 45CSR§7-4.1., and clarify in the streamlining statement that compliance with the limits in conditions 5.1.6., 6.1.2., and 7.1.1. ensures compliance with the 45CSR7, Table 45-7A limits.

- II. **Permit No. R14-0015L.** This permit revision removed multiple requirements and necessitates other changes to the operating permit as discussed in the following table. Unless specified, the PSD¹ permit condition numbers are those in the current permit R14-0015L.

PSD	Title V	Discussion
1.0	1.1	<ul style="list-style-type: none"> Multiple emission units in the Tanks (Group 001) have been revised. Under Melting & Refining Line 1 (Group 2), the hourly and annual capacities have been revised. The capacities of ES12C and ES12E have been modified. The name, installation date, and capacities have been revised for CD13A and CD13B. The control device CD13C has been added. The Hot Water Heaters (Em. Unit ESWH15) have been removed from the table since there are no applicable requirements for these units and they were not included in the underlying permit revision because they have been removed from service.
5.1.13.	3.1.16.	The requirements have been stricken and the condition has been reserved since phenol/formaldehyde resin has been removed as a raw material ingredient.
5.1.8.	3.1.17.	The citation of authority has been revised.
2.5.1.	3.1.19.	The reference to R14-0015L has been added.
5.1.9.	3.1.23.	The citation of authority is revised.
4.3.1.	3.3.10.	<ul style="list-style-type: none"> The first paragraph has been revised. Sub-condition 3.3.10.a.i. has been revised. The word “than” has been added to sub-condition 3.3.10.a.ii. Sub-condition 3.3.10.a.iv. has been revised. Former sub-condition 3.3.10.a.v. has been stricken. Subsequent sub-conditions have been re-numbered. Revised sub-condition 3.3.10.a.v. has been modified. Revised sub-condition 3.3.10.a.vi. has been modified. Revised sub-condition 3.3.10.a.vii. has been modified. Former sub-conditions 3.3.10.c. and d. have been stricken. Subsequent sub-conditions have been re-numbered. Revised sub-condition 3.3.10.c. has been modified.
4.3.2.	3.3.11.	The condition has been revised.
4.3.3.	3.3.12.	The reference to condition 6.1.3. has been deleted since the Thermox gas ratio setting requirement (R14-0015K, 4.1.1.d.) no longer applies to the 1 st production line.
4.3.4.	3.3.13.	The condition has been revised. The reference to conditions 4.1.3.b and c. in the underlying permit are changed to the corresponding conditions 6.2.4. and 6.2.5. in the operating permit.
4.3.5.	3.3.14.	The requirements have been stricken and the condition has been reserved since the requirement is no longer in the underlying permit.
4.2.3.	3.4.10.	The references to density and Methods in Appendices A and C of 40 C.F.R. 63 Subpart NNN have been deleted. The underlying permit language regarding ASTM method has been added to the operating permit. The NSR permit citation of authority is revised.
4.4.4.	3.4.13.	Although not corrected in R14-0015L, the extraneous word “the” is deleted before “any and all”.
Rev. K 5.5.1.	3.5.15.	The citation of this underlying requirement has been stricken since it was not included in the underlying permit revision. Moreover, the entire condition is stricken for the reasons given in the discussion of 45CSR27 below.

¹ While the underlying permit is a Prevention of Significant Deterioration (PSD) permit, this particular revision is a Class II Administrative Update written utilizing 45CSR13 permitting procedures and did not trigger additional PSD requirements since the changes did not cause a significant emissions increase or a significant net emissions increase. Refer to the Engineering Evaluation/Fact Sheet for R14-0015L, page 4 of 8.

PSD	Title V	Discussion
Rev. K 4.5.1.	3.5.16.	The requirements are stricken since the condition is not included in R14-0015L.
5.1.1.	4.1.1.	Several descriptions and control equipment model numbers have been revised.
Rev. K 5.1.11.	4.1.2.	The requirements have been stricken and the condition has been reserved since the requirement is no longer in the underlying permit.
Rev. K 5.1.12.	4.1.3.	The requirements have been stricken and the condition has been reserved since the requirement is no longer in the underlying permit. Since this VOC limit in 4.1.3. no longer exists, the corresponding recordkeeping in condition 4.4.4. has been stricken.
Rev. K 5.1.9.	4.1.6.	The requirements have been stricken and the condition has been reserved since the requirement is no longer in the underlying permit.
Rev. K 5.1.10.	4.1.7.	The requirements have been stricken and the condition has been reserved since the requirement is no longer in the underlying permit.
Rev. K 5.2.1.	4.4.1.	Since the requirements in 4.1.6. no longer exist, the corresponding recordkeeping in condition 4.4.1. has been stricken and the condition number has been reserved.
Rev. K 5.2.2.	4.4.2.	Since the requirements in 4.1.2. and 4.1.7. no longer exist, the corresponding recordkeeping in condition 4.4.2. has been stricken.
4.1.1.b.	5.1.4.	The hourly and annual limitations have been revised. The citation of authority has been revised to reflect the revised underlying permit condition number that changed due to new requirement 4.1.1.a.
4.1.2.b.	5.1.5.	The citation of authority has been revised to reflect the revised underlying permit condition number that changed due to new requirement 4.1.2.a.
4.1.1.c. 4.1.2.c.	5.1.6.	The citation of authority has been revised to reflect the revised underlying permit condition numbers that changed due to new requirements 4.1.1.a. and 4.1.2.a. The referencing condition 5.3.2. (now 5.3.1.) has been revised to refer to testing condition 3.3.11.
4.1.1.d.	5.1.7.	The word “loop” has been changed to “vent”. The citation of authority has been revised to reflect the revised underlying permit condition number that changed due to new requirement 4.1.1.a.
4.1.2.d.	5.1.8.	The word “loop” has been changed to “vent”. The citation of authority has been revised to reflect the revised underlying permit condition number that changed due to new requirement 4.1.2.a.
4.1.1.a. 4.1.2.a.	5.1.9.	The new underlying permit requirements have been added to the operating permit. Since the requirement is the same for both the 1 st and 2 nd production lines, one permit condition has been written combining both requirements.
4.1.3.a.	5.2.1	The language referring to the fabric filter bag leak detection guidance has been added.
4.1.2.h.	5.2.2.	The underlying permit language has been added to the operating permit. The citation of authority has been revised to reflect the revised underlying permit condition number that changed due to new requirement 4.1.2.a. Since the underlying condition 4.1.2. applies to the 2 nd line, this applicability has been specified after the citation of authority.
4.1.1.c. 4.1.2.c.	6.1.2.	<ul style="list-style-type: none"> The CO, NO_x, PM, PM₁₀, VOC, and NH₃ limits for EP13 have been revised. The HCOH and Phenol limits have been deleted. Footnote (2) has been applied to CO, VOC, and NH₃ limits for EP13 as explicitly shown in the PSD permit requirement. The footnote has also been applied to NO_x, PM, and PM₁₀ based upon supporting data contained in the Engineering Evaluation for the PSD permit revision. Table #3 in the Engineering Evaluation gives the NO_x limits for EP13 and E14 as 0.28 lb/TGP and 3.33 lb/TGP, respectively. This sums to the value 3.61 lb/TGP in the underlying permit requirement. PM and PM₁₀ emission limits are analogous. For example, the PM₁₀ limits in the Engineering Evaluation for EP13 and E14 are 3.08 lb/TGP and 0.41 lb/TGP, respectively. This sums to 3.49 lb/TGP in the underlying permit requirement.

PSD	Title V	Discussion
		<ul style="list-style-type: none"> The citation of authority has been revised to reflect the revised underlying permit condition number that changed due to new requirements 4.1.1.a. and 4.1.2.a.
Rev. K 4.1.1.d.	6.1.3.	The air-to-fuel ratio requirements as indicated by the Thermox gas ratio setting for both the fiberizers and forehearth have been stricken and the condition has been reserved since these requirements are no longer in the underlying permit for the 1 st production line.
4.1.2.e.	6.1.4.	The citation of authority has been revised to reflect the revised underlying permit condition number that changed due to new requirement 4.1.2.a.
4.1.1.e.	6.1.5.	The word “loop” has been changed to “vent”. The language regarding water sprays with drop-out boxes has been changed to wet scrubbers and the scrubber IDs are specified.
4.1.2.f.	6.1.6.	The word “loop” has been changed to “vent”. The citation of authority has been revised to reflect the revised underlying permit condition number that changed due to new requirement 4.1.2.a.
Rev. K 4.1.3.b.	6.1.7.	The requirements are stricken and the condition is reserved since it is not included in R14-0015L because the permittee no longer utilizes a water-jet ring and phenol/formaldehyde resin has been removed as a raw material ingredient.
4.2.4.	6.2.3.	The new language regarding Knauf Technology has been added at the end of the permit condition. The citation of authority has been revised.
4.1.3.b.	6.2.4.	The scrubbers CD13A, CD13B, and CD13C have been added to the condition. The 60-day timing requirement has been added to the condition. The citation of authority has been revised.
4.1.3.c.	6.2.5.	The language is revised to reference a wet scrubber and delete the drop-out boxes. Control device CD13C has been added to the condition. The 60-day timing requirement has been added to the condition. The citation of authority has been revised.
Rev. K 4.1.3.e.	6.2.6.	The requirement has been stricken since drop-out boxes are no longer utilized and the requirement is no longer in the underlying permit.
Rev. K 4.5.2.	6.4.1.	The reference to drop-out boxes has been stricken and the citation of authority has been revised.
4.5.1.	6.4.3.	The citation of authority has been revised.
4.1.1.c. 4.1.2.c.	7.1.1.	<ul style="list-style-type: none"> The CO, NO_x, PM, PM₁₀, VOC, and NH₃ limits for EP14 have been revised. The HCOH and Phenol limits have been deleted. Footnote (2) has been applied to CO, VOC, and NH₃ limits for EP14 as explicitly shown in the PSD permit requirement. The footnote has also been applied to NO_x, PM, and PM₁₀ based upon supporting data contained in the Engineering Evaluation for the PSD permit revision, which was discussed in further detail above regarding Title V condition 6.1.2. The citation of authority has been revised to reflect the revised underlying permit condition number that changed due to new requirements 4.1.1.a. and 4.1.2.a.
4.1.1.f.	7.1.2.	The word “loop” has been changed to “vent”. The language about formaldehyde and phenol has been deleted. The indefinite article “a” has been added to the last sentence.
4.1.2.g.	7.1.3.	The word “loop” has been changed to “vent”. The language about formaldehyde and phenol has been deleted. The indefinite article “a” has been added to the last sentence.
4.1.2.i.	7.1.4.	The word “loop” has been changed to “vent”. The citation of authority has been revised.
4.1.3.d.	7.2.2.	The citation of authority is revised.

PSD	Title V	Discussion
5.1.3.	9.1.1.	Multiple emission limits have been revised: <ul style="list-style-type: none"> For the Caterpillar 3406 (EP16), the Title V will continue to specify 1.04 TPY of CO since the underlying permit specified only one significant digit and the annual rate is $(4.16 \text{ lb/hr}) \times (500 \text{ hr/yr}) \times (1 \text{ ton} / 2,000 \text{ lb}) = 1.04 \text{ ton/yr}$. For the Caterpillar 3456 (EP17), the hourly and annual emission limits of CO and VOCs have been revised. For the Cummins NT-855-F1 (EP18), the hourly limits of PM and CO, and the annual limit for SO₂ have been revised. The citation of 45CSR§30-12.7. has been stricken since it is no longer needed.
5.1.6.	9.1.4.	The language regarding the five (5) 75 MBTU/hr binder water heaters (ID. No. ESHW15) has been stricken.
5.1.7.	9.1.5.	The citation of authority is revised.
5.2.1.	9.4.1.	The citation of authority is revised.

III. **45CSR27 – To Prevent and Control the Emissions of Toxic Air Pollutants.** The purpose of this rule is to prevent and control the discharge of toxic air pollutants requiring the application of best available technology. The facility has been subject to this rule due to its potential emissions of formaldehyde, which is a toxic air pollutant listed in 45CSR§27-2.10. One of the main purposes of this permitting action was to change to a non-phenol/formaldehyde resin, which caused a decrease in the formaldehyde potential emissions to a level less than the 1,000 lb/yr threshold specified in Table A of the rule. Consequently, the facility does not meet the criteria in 45CSR§27-3.1. and is therefore not subject to BAT requirements in 45CSR27. According to technical correspondence, the permittee no longer has the potential to spill HAPs or TAPs. Therefore, 45CSR27 is no longer applicable and the following permit conditions have been removed from the operating permit: 3.1.16., 3.1.20., 3.1.21., 3.1.24., 3.4.6., 3.5.15., 3.5.17., and 4.1.5.

IV. **40 C.F.R. 60 Subpart PPP – Standards of Performance for Wool Fiberglass Insulation Manufacturing Plants.** This subpart applies to each rotary spin wool fiberglass insulation manufacturing line constructed, modified, or reconstructed after February 7, 1984. Subpart PPP sets a particulate matter standard of 11.0 lbs/ton glass pulled (cf. §60.682). Subpart PPP applies to the Inwood facility and will continue to apply to modified Line 1. As such, the permittee will continue to comply with the requirements of this subpart after the completion of the proposed project permitted under R14-0015L. A performance test after the completion of the changes will be required to demonstrate compliance with this subpart (permit condition 3.3.11.). The following changes have been made in the permit with respect to Subpart PPP.

- The permittee stated that U.S. EPA has approved the use of a glass pull rate monitoring system that is more accurate than the equations in §60.685(c). Specifically, the monitoring system that Knauf Insulation utilizes is glass flow rate cameras. The Federal Register abstract states that U.S. EPA finds that determining pull rates using properly calibrated flow cameras should be more accurate than those determined using the equations in NSPS Subpart PPP. The alternative has been added to permit condition 3.3.18.(3).
- It has been noted that permit condition 6.2.1. is a redundant requirement with the requirements in permit conditions 6.2.4. and 6.2.5. Therefore, the contents of permit condition 6.2.1. have been stricken and the condition number has been reserved. References to 6.2.1. have been changed to 6.2.4. and 6.2.5. in permit conditions 6.3.2. and 6.4.1.
- The permittee stated that U.S. EPA has concurred that scrubber pressure drop and scrubber flow rate greater than 130 percent of the baseline levels, established during the most recent successful performance test, are not considered periods of excess emissions. The Federal Register abstract states that U.S. EPA agrees that control device efficiency should improve when operating in these ranges. Language providing this exception has been added to permit condition 6.4.3. and the location in the Federal Register has been included as well.

- V. **40 C.F.R. 63 Subpart NNN – National Emission Standards for Hazardous Air Pollutants for Wool Fiberglass Manufacturing.** This NESHAP-MACT applies to the owner or operator of each wool fiberglass manufacturing facility that is a major source or is located at a major source of HAP (cf. §63.1380(a)). Further, this subpart does not apply to a wool fiberglass manufacturing facility that is not a major source of HAP emissions (cf. §63.1380(c)).

The following definitions at 40 C.F.R. §63.1381 are relevant:

- *Bonded* means wool fiberglass to which a phenol-formaldehyde binder has been applied.
- *Building insulation* means bonded wool fiberglass insulation, having a loss on ignition of less than 8 percent and a density of less than 32 kilograms per cubic meter (kg/m³) (2 pounds per cubic foot [lb/ft³]).
- *Rotary spin* means a process used to produce wool fiberglass building insulation by forcing molten glass through numerous small orifices in the side wall of a spinner to form continuous glass fibers that are then broken into discrete lengths by high-velocity air flow. Any process used to produce bonded wool fiberglass building insulation by a process other than flame attenuation is considered rotary spin.
- *Wool fiberglass manufacturing facility* means any facility manufacturing wool fiberglass on a rotary spin manufacturing line or on a flame attenuation manufacturing line.

The permittee utilizes rotary spin type manufacturing technology, but does not utilize flame attenuation manufacturing processes. 40 C.F.R. §63.1380(b)(2) specifies that this subpart applies to HAP emissions from an existing rotary spin manufacturing line producing a *bonded* wool fiberglass building product. With the permitted conversion to ECOSE Technology, 100% non-phenol/formaldehyde binder, a bonded product is no longer produced; consequently, this subpart does not apply to the permitted existing rotary spin manufacturing lines.

Furthermore, “building insulation” is defined in Subpart NNN as “bonded” wool fiberglass insulation. Since the permittee no longer produces “bonded” wool fiberglass insulation it follows that it no longer produces “building insulation” as defined in Subpart NNN. The regulation defines “rotary spin” as a process used to produce wool fiberglass “building insulation”. Since “building insulation” is not produced at the facility, then the lines are not “rotary spin” as defined in Subpart NNN. Since they are not “rotary spin” lines, then the facility is not a “wool fiberglass manufacturing facility”. Consequently, by its definitions this subpart does not apply to the Inwood facility.

Title V	Discussion
3.1.18.	The requirements are stricken and the condition is reserved since the facility is no longer subject to 40 C.F.R. 63 Subpart NNN.
3.2.1.	The requirements are stricken and the condition is reserved since the facility is no longer subject to 40 C.F.R. 63 Subpart NNN.
3.2.2.	The requirements are stricken since the facility is no longer subject to 40 C.F.R. 63 Subpart NNN.
3.3.4.	The requirements are stricken and the condition is reserved since the facility is no longer subject to 40 C.F.R. 63 Subpart NNN.
3.3.5.	The requirements are stricken and the condition is reserved since the facility is no longer subject to 40 C.F.R. 63 Subpart NNN.
3.3.6.	The requirements are stricken and the condition is reserved since the facility is no longer subject to 40 C.F.R. 63 Subpart NNN.
3.3.7.	The requirements are stricken and the condition is reserved since the facility is no longer subject to 40 C.F.R. 63 Subpart NNN.
3.3.8.	The requirements are stricken and the condition is reserved since the facility is no longer subject to 40 C.F.R. 63 Subpart NNN.
3.3.9.	The requirements are stricken and the condition is reserved since the facility is no longer subject to 40 C.F.R. 63 Subpart NNN.

Title V	Discussion
3.4.4.	The requirements are stricken and the condition is reserved since the facility is no longer subject to 40 C.F.R. 63 Subpart NNN.
3.4.5.	The requirements are stricken and the condition is reserved since the facility is no longer subject to 40 C.F.R. 63 Subpart NNN.
3.4.8.	The requirements are stricken and the condition is reserved since the facility is no longer subject to 40 C.F.R. 63 Subpart NNN.
3.4.9.	The requirements are stricken and the condition is reserved since the facility is no longer subject to 40 C.F.R. 63 Subpart NNN.
3.4.10.	The citation of authority is revised in order to delete “40 C.F.R. §63.1383(l); 45CSR34”.
3.5.10. – 3.5.14.	The requirements are stricken since the facility is no longer subject to 40 C.F.R. 63 Subpart NNN.
4.1.4.	The requirements are stricken and the condition is reserved since the facility is no longer subject to 40 C.F.R. 63 Subpart NNN. Recordkeeping condition 4.4.3. has been stricken since it pertained to the requirement in 4.1.4.
5.1.1.	The requirements are stricken since the facility is no longer subject to 40 C.F.R. 63 Subpart NNN. Since this requirement no longer exists, the referenced condition 5.3.1. has been deleted.
5.1.2.	The requirements are stricken and the condition is reserved since the facility is no longer subject to 40 C.F.R. 63 Subpart NNN.
5.1.3.	The requirements are stricken and the condition is reserved since the facility is no longer subject to 40 C.F.R. 63 Subpart NNN.
5.2.1.	The requirements in the initial paragraph and in sub-conditions (i) through (vii) have been stricken. The underlying permit language in the past paragraph has been retained and modified. The citation of authority has been revised.
5.4.1.	The citation of authority is revised in order to delete “40 C.F.R. §63.1386(d)(2)(i); 45CSR34”.
6.1.1.	The requirements are stricken and the condition is reserved since the facility is no longer subject to 40 C.F.R. 63 Subpart NNN. Since this requirement no longer exists, the referenced condition 6.3.1. has been deleted and the condition number reserved.
7.1.2.	The citation of authority is revised in order to delete “40 C.F.R. §63.1382(b)(6); 45CSR34”.
7.1.3.	The citation of authority is revised in order to delete “40 C.F.R. §63.1382(b)(6); 45CSR34”.
7.2.1.	The requirements are stricken and the condition is reserved since the facility is no longer subject to 40 C.F.R. 63 Subpart NNN.

VI. **40 C.F.R. 63 Subpart ZZZZ - National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines.** This regulation establishes national emission limitations and operating limitations for hazardous air pollutants (HAP) emitted from stationary reciprocating internal combustion engines (RICE) located at major and area sources of HAP emissions. The current operating permit includes requirements based upon the facility being a major source of HAP. However, due to the permitted changes under R14-0015L, the facility became an area source of HAP. The following RICE are still utilized at the facility, and are re-evaluated to determine the applicability of Subpart ZZZZ to them:

- a. **Emergency Fire Water Pump Engine (Em. Unit ID: ESW11).** This compression ignition (CI) RICE was constructed in 1998 and is rated at 255-hp. The engine is an *Existing stationary RICE* since it meets the horsepower and construction date criteria in §63.6590(a)(1)(ii). The engine does not meet any of the criteria to be subject to limited requirements or NSPS requirements under §§63.6590(b) or (c), respectively. This engine has been subject to a substantive Subpart ZZZZ requirement (i.e., work/management practices) before the source status changed from major to area. Based upon U.S. EPA’s “Once In Always In” (OIAI) policy, the engine will remain subject to the applicable *major* source requirements already in the operating permit. To avoid confusion it should be noted that some of the applicable requirements include the words “major source”

because even though the facility is no longer a major source of HAP, engine ESW11 remains subject to major source requirements. Similarly, language applicable to engines ESDG12 and ESDG13 (discussed below) contains the words “area source”. This should not cause confusion since ESW11 remains subject to major source requirements (due to OIAI policy), but ESDG12 and ESDG13 have become subject to substantive Subpart ZZZZ requirements upon the source status change from major to area with this permitting action.

- b. **Line #1 Emergency Generator (Em. Unit ID: ESDG12).** This compression ignition (CI) RICE was constructed in 1998 and is rated at 587-bhp. The engine is an *Existing stationary RICE* since it meets the horsepower and construction date criteria in §63.6590(a)(1)(i). While the facility was a major source of HAP, this engine met the exemption criteria in §63.6590(b)(3)(iii) which exempted ESDG12 from meeting the requirements of Subpart ZZZZ and Subpart A, including the initial notification requirements. As such, ESDG12 was not subject to a substantive Subpart ZZZZ requirement. However, since the source status has changed from major to area, engine ESDG12 has become **subject to substantive requirements (work/management practices) under §63.6603(a)**, which are in **Table 2d, Item #4**. The applicable requirements are given in Table ZZZZ below, along with a discussion as to how and where they are incorporated into the Title V permit. Note that in Table ZZZZ some requirements will apply to other engines, but certain requirements will apply only to one engine based upon the engine horsepower rating.
- c. **Line #2 Emergency Generator (Em. Unit ID: ESDG13).** This compression ignition (CI) RICE was constructed in 2004 and is rated at 610-bhp. The engine is an *Existing stationary RICE* since it meets the area source status and construction date criteria in §63.6590(a)(1)(iii). Formerly, the engine was considered a new emergency stationary RICE with a site rating of more than 500-bhp located at a major source of HAP emissions (cf. criteria in §63.6590(a)(2)(i)), and did not have to meet the requirements of Subpart ZZZZ and of Subpart A to Part 63 except for the initial notification requirements in §63.6645(f), which was determined in accordance with §63.6590(b)(1) and §63.6590(b)(1)(i). The applicable initial notification requirement of §63.6645(f) had been set forth as permit condition 9.5.2. As such, ESDG13 was not subject to a substantive Subpart ZZZZ requirement. However, since the source status has changed from major to area, engine ESDG13 has become **subject to substantive requirements (work/management practices) under §63.6603(a)**, which are in **Table 2d, Item #4**. Table ZZZZ below examines each section in the RICE MACT and describes how applicable requirements are incorporated into the revised permit and why certain requirements in the regulation are not applicable.

Table ZZZZ

Subpart ZZZZ Section	Affected Engine	Condition	Discussion
§63.6595(a)(1)	ESDG12 ESDG13	9.1.9.1.	Even though the source status changed, the compliance date remains May 3, 2013. The compliance date is now past; however, it has been retained in the permit indicating that the RICE must now be in compliance with the MACT. This means that ESDG12 and ESDG13 must be in compliance with this subpart upon change from major to area source. The major source language has been retained for ESW11. The requirement for ESDG12 and ESDG13 has been written as sub-condition 9.1.9.1. in order to keep like requirements together and simplify incorporation of them into the modified operating permit.
§63.6600	None	None	Only engines ESDG12 and ESDG13 are becoming subject to new requirements, and those for area sources. This section applies to engines located at a major source; therefore, this section is not applicable.

Subpart ZZZZ Section	Affected Engine	Condition	Discussion
§63.6601	None	None	Same as discussion of §63.6600.
§63.6602	ESFW11	9.1.10.	This section remains applicable to ESFW11.
§63.6603(a)	ESDG12 ESDG13	9.1.10.	This section is applicable since the units are existing stationary RICE located at an area source of HAP emissions. In Table 2d to Subpart ZZZZ, Item #4 is applicable to ESDG12 and ESDG13. The footnotes are revised to specify which Subpart ZZZZ table applies to each engine. Additionally, applicable requirement §63.6625(h) is included and cited in this permit condition since it repeats the requirement to minimize the engine's time spent at idle and to minimize the startup time.
§§63.6603(b)-(e)	None	None	These sections are not applicable since the units are not non-emergency type.
§63.6603(f)	None	None	This section is not applicable since the units are not spark ignition type.
§63.6604(a)	None	None	This section is not applicable since the units are emergency type.
§63.6604(b)	None	None	This section is not applicable since the units do not operate and are not contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in §63.6640(f)(2)(ii) and (iii), and do not operate for the purpose specified in §63.6640(f)(4)(ii).
§63.6604(c)	None	None	This section is not applicable since the units are existing.
§63.6604(d)	None	None	This section is not applicable since the units are not located in Guam, American Samoa, the Commonwealth of the Northern Mariana Islands, at an area source in Alaska, or on an offshore vessel.
§63.6605(a)	None	None	This section is not applicable since the units are not subject to emission limitations and operating limitations of Subpart ZZZZ.
§63.6605(b)	ESFW11 ESDG12 ESDG13	9.1.11.	The general requirement §63.6605(b) is applicable, and is set forth as a permit condition. The requirement remains applicable to ESFW11, while engines ESDG12 and ESDG13 have been added to the citation of authority.
§63.6610	None	None	This section is not applicable since the facility is not a major source of HAP emissions.
§63.6611	None	None	This section is not applicable since the facility is not a major source of HAP emissions.
§63.6612	None	None	This section is not applicable since the units are not subject to emission limitations and operating limitations under Subpart ZZZZ.

Subpart ZZZZ Section	Affected Engine	Condition	Discussion
§63.6615	None	None	This section is not applicable since the units are not subject to emission limitations and operating limitations under Subpart ZZZZ.
§§63.6620(a) through (i)	None	None	This section is not applicable since the units are not subject to emission limitations and operating limitations under Subpart ZZZZ.
§63.6625(a)	None	None	This section is not applicable since there is no CEMS for the units.
§63.6625(b)	None	None	This section is not applicable since there is no CPMS for the units.
§63.6625(c)	None	None	This section is not applicable since the units do not fire landfill gas or digester gas.
§63.6625(d)	None	None	This section is not applicable since the units are existing CI RICE.
§63.6625(e)	ESFW11 ESDG12 ESDG13	9.1.12.	The condition has been modified to more closely reflect the regulation language and account for different citations for ESFW11 and the two emergency generator engines ESDG12 and ESDG13.
§63.6625(f)	ESFW11 ESDG12 ESDG13	9.1.13.	The condition has been modified to more closely reflect the regulation language. References to the engines have been added for clarification.
§63.6625(g)	None	None	This section is not applicable since the units are emergency CI RICE.
§63.6625(h)	ESFW11 ESDG12 ESDG13	9.1.10.	This section is applicable to the units, and has already been included in the requirements of Table 2c, Item #1, and Table 2d, Item #4.
§63.6625(i)	ESFW11 ESDG12 ESDG13	9.1.14.	The option of utilizing an oil analysis program pursuant to §63.6625(i) is applicable, excluding non-applicable language. Twice in the permit condition the language “2 days” is changed to “2 business days” to reflect the current regulation. The Subpart ZZZZ table and item numbers have been revised to reflect the applicable requirements for engines ESDG12 and ESDG13.
§63.6625(j)	None	None	This section is not applicable since the units are not a SI RICE.
§§63.6630(a) through (c)	None	None	<p>§63.6630(a) is not applicable since the units are not subject to emission and operating limitations from Subpart ZZZZ.</p> <p>§63.6630(b) is not applicable since the units are not subject to operating limitations from Subpart ZZZZ.</p> <p>The NOCS content requirement of §63.6630(c) is not applicable since none of the requirements in §§63.6630(a) through (b) are applicable.</p>

Subpart ZZZZ Section	Affected Engine	Condition	Discussion
§§63.6635(a) through (c)	None	None	§63.6635(a) is not applicable since the units are not subject to emission and operating limitations from Subpart ZZZZ. §§63.6635(b) and (c) are not applicable since the units are not subject to any continuous monitoring in Subpart ZZZZ.
§63.6640(a)	ESFW11 ESDG12 ESDG13	9.1.12.	The requirement to demonstrate continuous compliance with the applicable work practice and management practices in Tables 2c and 2d to Subpart ZZZZ pursuant to §63.6640(a) is applicable. In particular, the requirements in Item #9 of Table 6 to Subpart ZZZZ remain applicable to ESFW11, and have become applicable to ESDG12 and ESDG13. These requirements are already set forth in permit condition 9.1.12.
§63.6640(b)	ESFW11 ESDG12 ESDG13	9.5.3	The first statement is changed to include Table 2d. Engines ESDG12 and ESDG13 have been added to the citation of authority.
§63.6640(c)	None	None	This section is not applicable since the units are neither a 4SLB, nor a 4SRB, stationary RICE.
§63.6640(d)	None	None	This section is not applicable since the units are existing.
§63.6640(e)	ESFW11 ESDG12 ESDG13	9.5.4.	Engines ESDG12 and ESDG13 have been added to the citation of authority since this is an applicable requirement.
§§63.6640(f)(1)-(4)	ESFW11 ESDG12 ESDG13	9.1.15.	The requirement in condition 9.1.15.(3) is revised to specify that it applies to ESFW11. Applicable requirements in 63.6640(f)(4) have been added and their applicability is specified for ESDG12 and ESDG13. The citation of authority has been revised. Engines ESDG12 and ESDG13 have been added to the citation of authority.
§§63.6645(a) and (a)(5)	None	None	This section provides an exemption to the notification requirements (including the NOCS under 40 C.F.R. §63.9(h)) for an existing stationary emergency RICE (cf. §63.6645(a)(5)). Since the units meet the criterion, the notifications under §63.6645 do not apply.
§63.6645(b)	None	None	This section did not apply since ESFW11 is rated less than 500 brake HP. It does not apply to ESDG12 and ESDG13 since the facility is not a major source of HAP emissions.
§63.6645(c)	None	None	This section did not apply since ESFW11 is rated less than 500 brake HP. It does not apply to ESDG12 and ESDG13 since the facility is not a major source of HAP emissions.
§63.6645(d)	None	None	This section is not applicable since an initial notification is not required. Requirements for initial notification are in §63.9(b), which is not applicable, in accordance with the determination regarding §63.6645(a)(5).

Subpart ZZZZ Section	Affected Engine	Condition	Discussion
§63.6645(e)	None	None	This section is not applicable since the units are existing.
§63.6645(f)	None (formerly applicable to ESDG13)	None	This section was applicable and has been fulfilled for ESDG13 when the facility was a major source.
§§63.6645(g) and (h)	None	None	These sections are not applicable to the units since no performance tests or initial compliance demonstrations are required under Subpart ZZZZ.
§§63.6650(a) and (b)	None	None	These sections are not applicable to any of the units since they meet none of the criteria in Table 7 to Subpart ZZZZ.
§63.6650(c)	None	None	This section is not applicable since it pertains to Compliance Reports, which are not required for the units since they meet none of the criteria in Table 7 to Subpart ZZZZ.
§§63.6650(d) and (e)	None	None	This section is not applicable since no CMS is employed for the units.
§63.6650(f)	ESFW11 ESDG12 ESDG13	9.5.5.	The deviation reporting requirement of §63.6650(f) is applicable. Engines ESDG12 and ESDG13 have been added to the citation of authority.
§63.6650(g)	None	None	This section is not applicable since the units are existing and do not fire landfill gas or digester gas.
§63.6655(a)	None	None	This section does not apply since the units are not subject to emission and operating limitations.
§63.6655(b)	None	None	This section does not apply since neither CEMS nor CPMS are employed for the units.
§63.6655(c)	None	None	This section is not applicable since the units are existing and do not fire landfill gas or digester gas.
§63.6655(d)	None	None	This section does not apply since the units are not subject to emission and operating limitations.
§63.6655(e)	ESFW11 ESDG12 ESDG13	9.4.3.	The maintenance recordkeeping of §63.6655(e) is applicable since the RICE meet the criteria of §§63.6655(e)(2) and (3). The citation of authority has been revised. Engines ESDG12 and ESDG13 have been added to the citation of authority.
§63.6655(f)	ESFW11 ESDG12 ESDG13	9.4.4.	The requirement to record hours of operation in §63.6655(f) is applicable since ESFW11 meets the criteria of §63.6655(f)(1) and ESDG12 and ESDG13 meet §63.6655(f)(2). The language of both §63.6655(f) and §63.6655(f)(1) had been combined to create one coherent and applicable condition for ESFW11. However, with ESDG12 and ESDG13 becoming subject to this requirement, this current language has been replaced with language to more closely reflect the

Subpart ZZZZ Section	Affected Engine	Condition	Discussion
			regulation and specify the applicability to the engines.
§63.6660(a), (b), and (c)	ESFW11 ESDG12 ESDG13	9.4.5.	The requirements for format and retention of records specified in §63.6660 remain applicable. Engines ESDG12 and ESDG13 have been added to the citation of authority.

VII. Miscellaneous Revisions.

- a. **Name Change.** The permittee's name had been "Guardian Fiberglass, Inc.". However, Knauf Insulation, Inc. now owns the facility. The application for this minor modification stated the name "Knauf Insulation, LLC", which was accurate at the time of submittal. However, on 9/03/2015 the DAQ received a letter from the permittee indicating the name has been changed to "Knauf Insulation, Inc." The West Virginia Secretary of State's on-line Business Entity Search (accessed on 9/29/2015) concurred with the name change and indicated that the LLC designation was terminated on 8/5/2015. Accordingly, the name on the operating permit documents has been changed to "Knauf Insulation, Inc."
- b. **Emission Units Table Revisions.** The changes described below were noted by the permittee in technical correspondence regarding the pre-proposed permit. The comments were received via e-mail on November 16, 2015.
 - i. For the Roll UP ES15E the year installed has been changed from 07/25/1998 to 2015 because the unit was replaced. The model number has been changed from WM87-3000 to WM97-3000.
 - ii. For the Batt Packers ES15G the year installed has been changed from 07/25/1998 to 2015 because the unit was replaced
 - iii. Emission unit ES15J has been deleted because the Ring Wrapper is no longer used.
 - iv. The description of CD15D has been changed to indicate (1) screen room instead of (2).
- c. **Permit Shield.** Several changes have been made in the permit shield.
 - i. Permit shield item 3.7.2.1.b. has been stricken since 40 C.F.R. 63 Subpart NNN is no longer applicable due to revising the process to use a non-bonded binder. Subsequent item letters under 3.7.2.1. have been revised.
 - ii. The contents of the row for ESHW15 in permit shield item 3.7.2.2. have been stricken since the hot water heaters have been removed from service.
 - iii. Permit shield item 3.7.2.10. has been revised since the facility is no longer a major source of HAP.
 - iv. A non-applicability determination regarding 40 C.F.R. 63 Subpart NN has been added to the permit shield as section 3.7.2.13.
- d. **Suggested Testing Language.** Conditions 6.3.3. and 7.3.1. have been revised to reflect the new Knauf ECOSE Technology non-phenol/formaldehyde binder. The new language was proposed by the permittee in suggested permit language submitted to the writer via e-mail on August 6, 2015, and November 16, 2015.

- e. ESHW15 and corresponding emission point ID EP20 have been removed from the listing of emission units in the section heading 9.0.

Non-Applicability Determinations

The following requirements have been determined not to be applicable to the subject facility due to the following:

1. **40 C.F.R. 63 Subpart JJJJJ - National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources.** With the changes approved in R14-0015L the facility is an area source of HAP. Further, the Air Handling Units ESSH15 and ESSH16 are not boilers as defined in §63.11237. That is, the units do not heat water to recover thermal energy in the form of steam and/or hot water. For these reasons the Air Handling Units ESSH15 and ESSH16 are not subject to Subpart JJJJJ.
2. **45CSR2 – To Prevent and Control Particulate Air Pollution from Combustion of Fuel in Indirect Heat Exchangers.** This rule establishes emission limitations for smoke and particulate matter which are discharged from fuel burning units (45CSR§2-1.1). A “fuel burning unit” means and includes any furnace, boiler apparatus, device, mechanism, stack or structure used in the process of burning fuel or other combustible material for the primary purpose of producing heat or power by indirect heat transfer (45CSR§2-2.10.). The current permit incorrectly applied 45CSR2 to the Air Handling Units ESSH15 and ESSH16. This has been determined since these units are actually direct fired type. The units are not indirect heat exchangers, which was confirmed by review of the 2013 renewal application. Based upon this discovered fact, permit condition 9.1.6. has been stricken and reserved. This rule does not apply to any other emission units at the facility as of issuance of this permitting action MM01.
3. **45CSR10 – To Prevent and Control Air Pollution from Emission of Sulfur Oxides.** This rule establishes sulfur dioxide weight emission standards for fuel burning units and limits the in-stack sulfur dioxide concentration emitted from a source operation (45CSR§§10-3.1. and 4.1.). A “fuel burning unit” means and includes any furnace, boiler apparatus, device, mechanism, stack or structure used in the process of burning fuel or other combustible material for the primary purpose of producing heat or power by indirect heat transfer (45CSR§10-2.8.). The current permit incorrectly applied 45CSR10 to the Air Handling Units ESSH15 and ESSH16 since these units are actually direct fired type. The units are not indirect heat exchangers, which was confirmed by review of the 2013 renewal application. The heading of Section 9.0 lists emission units ESDG12, ESDG13, ESFW11, ESSH15, ESSH16, and ESHW15. As discussed above, ESHW15 has been removed from service. Also, permit shield section 3.7.2.2. already specifies that 45CSR10 does not apply to the engines ESDG12, ESDG13, and ESFW11, as well as the air handlers ESSH15 and ESSH16. As such, there are no remaining emission units in Section 9.0 (or the entire permit) that are subject to 45CSR10. For these reasons 45CSR10 is not applicable to any of the sources at the facility. Consequently, permit conditions 9.1.7. and 9.1.8. have been stricken and reserved, and the permit shield section 3.7.2.2. has been revised to reflect these facts pertaining to ESSH15 and ESSH16.
4. **40 C.F.R. 63 Subpart NN – National Emission Standards for Hazardous Air Pollutants for Wool Fiberglass Manufacturing at Area Sources.** This NESHAP-MACT applies to the owner or operator of each wool fiberglass manufacturing facility that is an area source or is located at a facility that is an area source of HAP (*cf.* §63.880(a)). In particular, this subpart applies to emissions of chromium compounds emitted from new and existing *gas-fired glass-melting furnaces* located at a wool fiberglass manufacturing facility that is an area source (*cf.* §63.880(b)). The permittee owns and operates a wool fiberglass manufacturing facility that is an area source of HAP; however, the permittee does not utilize a *gas-fired glass-melting furnace*. Instead, the permittee utilizes *cold top electric glass-melting furnaces* as defined in 40 C.F.R. 63 Subpart NNN

(cf. §63.1381). The furnace type was confirmed by the permittee as part of the technical review for the 2008 Title V permit renewal and was documented in its Fact Sheet. The permittee confirmed in 12/16/2015 technical correspondence that the furnaces are still *cold top electric glass-melting furnaces*. The definition of *gas-fired glass-melting furnace* in §63.881 specifically states that cold-top electric glass-melting furnaces as defined in Subpart NNN of this part are not gas-fired glass-melting furnaces. Since the permittee's furnaces do not meet the definition of *gas-fired glass-melting furnace* in §63.881 they are not subject to the limitations and standards in 40 C.F.R. 63 Subpart NN.

Request for Variances or Alternatives

None.

Insignificant Activities

Insignificant emission unit(s) and activities are identified in the Title V application.

Comment Period

Beginning Date:	Not Applicable for minor modifications.
Ending Date:	N/A

Point of Contact

All written comments should be addressed to the following individual and office:

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West Virginia Department of Environmental Protection
Division of Air Quality
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Charleston, WV 25304
Phone: 304/926-0499 ext. 1221 • Fax: 304/926-0478
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Procedure for Requesting Public Hearing

During the public comment period, any interested person may submit written comments on the draft permit and may request a public hearing, if no public hearing has already been scheduled. A request for public hearing shall be in writing and shall state the nature of the issues proposed to be raised in the hearing. The Secretary shall grant such a request for a hearing if he/she concludes that a public hearing is appropriate. Any public hearing shall be held in the general area in which the facility is located.

Response to Comments (Statement of Basis)

Not applicable for proposed permits.